

CLAIMS:

Sub a² 1. A composition comprising a first polynucleotide that hybridizes to a second, Bcl-2-encoding polynucleotide under intracellular conditions and a neutral lipid associated with said first polynucleotide, and wherein said composition contains no cationic lipid.

5 2. The composition of claim 1, wherein said first polynucleotide is an oligonucleotide having a length of between about 8 and about 50 bases.

3. The composition of claim 1, wherein the first polynucleotide is complementary to the translation initiation site of Bcl-2 mRNA.

4. The composition of claim 3, wherein the polynucleotide is an oligonucleotide comprising the sequence CAGCGTGCGCCATCCTTC (SEQ ID NO:1).

Sub a³ 5. The composition of claim 1, comprising a liposome formed from the lipid.

6. The composition of claim 5, wherein the first polynucleotide is encapsulated in the liposome.

7. The composition of claim 1, wherein the lipid is a phosphatidylcholine, a phosphatidylglycerol, or a phosphatidylethanolamine.

8. The composition of claim 7, wherein the lipid is dioleoylphosphatidylcholine.

9. A composition comprising an expression construct that encodes a first polynucleotide that hybridizes to a second, Bcl-2-encoding polynucleotide under intracellular conditions, wherein said first polynucleotide is under the control of a promoter that is active in eukaryotic cells, and wherein said construct is associated with a neutral lipid, and further wherein said composition contains no cationic lipid.

20 10. A method of inhibiting a Bcl-2-associated disease comprising obtaining a first polynucleotide that hybridizes to a second, Bcl-2-encoding polynucleotide under intracellular conditions, mixing the first polynucleotide with a neutral lipid to form a polynucleotide/lipid association, and administering said association to a cell, wherein said cell expresses both Bcl-2 and Bax.

- Sub 24
11. The method of claim 10, wherein the cell is a cancer cell.
12. The method of claim 11, wherein said cancer cell is a follicular lymphoma cell.
13. The method of claim 10, wherein said first polynucleotide is an oligonucleotide having a length of between about 8 and about 50 bases.
- 5 14. The method of claim 10, comprising a liposome formed from the lipid.
15. The method of claim 14, wherein the liposome encapsulates the first polynucleotide.
16. The method of claim 10, wherein said contacting takes place in an animal.
17. The method of claim 16, wherein said animal is a human.
- Sub 25
- 10 18. The method of claim 17, wherein said composition is delivered to said human in a volume of 0.50-10.0 ml per dose.
19. The method of claim 17, wherein said composition is delivered to said human in an amount of from about 5 to about 30 mg polynucleotide per m².
20. The method of claim 19, wherein said composition is administered three times per week for eight weeks.
- add 26